

Statement for the Record

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Introduction

Good morning and thank you, Chairman Reichert, Ranking Member Pascrell, and Members of the Subcommittee, for the invitation to speak to you today.

Today's testimony will focus on SAFECOM and its role in improving public safety communications. SAFECOM is the communications program of the Office for Interoperability and Compatibility (OIC), which resides in the Office of Systems Engineering and Development, Science and Technology (S&T) Directorate, Department of Homeland Security (DHS). SAFECOM provides research, development, testing, evaluation, guidance, and assistance for Federal, State, local, and tribal public safety agencies working to improve public safety response through more efficient and effective interoperable wireless communications. Communications interoperability refers to the ability of public safety agencies to talk across disciplines and jurisdictions via radio communications systems, exchanging voice and data with one another on demand, in real time as authorized.

Since September 11, 2001, significant progress has been made to improve communications for the public safety community as more and more jurisdictions move from being simply operable to being interoperable. However, it is apparent that more progress must be achieved. Much of this advancement can be attributed to the priority that both the Administration and Congress have placed on achieving communications interoperability. In 2001, SAFECOM was established as a Presidential Management Initiative and charged with strengthening interoperability at all levels of government by coordinating Federal programs, initiating a comprehensive standards program, and developing a national interoperable communications architecture. In 2004, the Department established OIC to further strengthen and integrate interoperability and compatibility efforts to help improve Federal, State, local, and tribal public safety preparedness and response. OIC was directed to:

- Identify and coordinate all DHS programs that address interoperability;
- Support the creation of interoperability standards;
- Establish a comprehensive research, development, testing, and evaluation (RDT&E) program for improving public safety interoperability;
- Integrate coordinated grant guidance across all DHS grant-making agencies that address public safety interoperability;
- Oversee the development and implementation of technical assistance for public safety interoperability;
- Conduct pilot demonstrations;
- Create an interagency interoperability coordination council; and
- Establish an effective outreach program.

Relationship between Operability and Interoperability

Communications operability refers to the functional capability of a communications system that makes a specific operation possible. For example, operability exists when all responders within one agency can speak with each other by radio. The next step is to become interoperable—which we at SAFECOM define as facilitating communications between and among agencies and jurisdictions.

From its creation, SAFECOM has always emphasized the importance of operability within an organization because it is a prerequisite for interoperability. As Hurricane Katrina demonstrated, in the absence of a reliable network across which responders within an agency can effectively communicate, interoperability is neither possible nor relevant.

For agencies that already have communications operability, SAFECOM has created a number of highly successful tools and methodologies that can be used to help achieve interoperability. For agencies that do not yet have communications operability, much of SAFECOM's work is still applicable. When operability itself is incomplete, it is usually the result of technical issues. SAFECOM's work in helping to develop standards, encouraging system migration, and participating in the coordination of communications spectrum policy have all helped improve operability across the Nation. Once basic operability is achieved, agencies can then focus on achieving interoperability.

SAFECOM's Vision for Improving Communications

Practitioners have helped SAFECOM articulate a long-term vision for interoperability which projects that in the future emergency responders will operate on a national system-of-systems using standards-based equipment that provides the capability to respond to an incident anywhere in the country, using their own equipment, on any network, and on dedicated public safety spectrum. They will be able to communicate with each other, as authorized, in real time via voice, data, and video-on-demand. Achieving this vision will require effort in five critical areas, including:

1. Development of guidelines and criteria for public safety communications systems;
2. Coordination of testing and evaluation processes;
3. Standardization of equipment fortified by grant guidance;
4. Coordination of communications spectrum policy; and
5. Coordination of communications planning.

These efforts will take time to achieve, but many of them are already beginning to strengthen communications and interoperability in the public safety community.

Development of Guidelines and Criteria for Public Safety Communications Systems

Communications plans to support incident response should be developed based on a national architecture framework with common guidelines and criteria for public safety communications systems. Only when these guidelines are universally broadly recognized and followed will emergency responders and the larger public safety community be able to communicate

effectively. To that end, SAFECOM published Version 1.0 of the first ever comprehensive Statement of Requirements (SoR) for Public Safety Wireless Communications and Interoperability. Developed with public safety practitioner input, the SoR defines the functional requirements for public safety communications. Subsequent versions will further refine these technical requirements so that industry will have a blueprint from which to build technologies that address public safety needs. This SoR also serves as the basis for developing a national architecture framework for public safety communications interoperability. SAFECOM is working to develop a Public Safety Architecture Framework (PSAF) that, along with the SoR, will serve as a tool to help the Nation's emergency responder agencies understand the technical requirements and national migration path toward fully interoperable communications systems without imposing requirements that stifle innovation.

For agencies that do not yet have communications operability, the SoR and PSAF are useful tools for analyzing options to achieve basic operability and to achieve interoperability in the near future. The PSAF allows agencies to understand that they need to have a communication system that is not only operable, but also interoperable with other systems in the region, while the SoR identifies technical requirements needed for new systems.

Coordination of Testing and Evaluation Processes

The testing and evaluation of equipment will help communities identify their levels of operability. Coordinated testing and evaluation processes will ensure communications equipment meets the critical needs of emergency responders; the first critical need being operability. Public safety agencies face many complex procurement decisions and do not always have in-house expertise to validate manufacturer's claims. To ensure that public safety agencies can trust the claims made by vendors, communications equipment needs to be independently tested and evaluated. To do this, SAFECOM created a testing and evaluation working group to help ensure that methodologies for testing and evaluation of interoperability products are technically sound and comparable across testing laboratories. The working group members are practitioners and subject matter experts from law enforcement, fire services, and emergency medical services. These members help review and develop test criteria and serve the program by determining which products should be evaluated.

Standardization of Equipment Fortified by Grant Guidance

Standardization of equipment, fortified by grant guidance measures, is an essential step in achieving improved communications. The equipment must adhere to communications standards that allow for operability as well as interoperability. As standards are created, funding solutions must also be implemented to help jurisdictions focus on meeting interoperability goals and requirements. To better coordinate funding for interoperability solutions, such as purchasing new equipment, developing State plans, and other activities, SAFECOM coordinated resolution of conflicting Federal grant guidance. This will help maximize the impact of limited Federal resources to create systems that improve interoperability rather than making it more difficult to achieve.

SAFECOM's coordinated grant guidance outlines eligibility for grants, the purposes for which grants can be used, and the guidelines for implementing a wireless communications system in order to help maximize the efficiency with which public safety communications related grant dollars are allocated and spent. To ensure consistency in interoperability grant solicitations, this guidance has been included in grant programs administered by the Department of Justice and other agencies within DHS.

Within DHS, the Office for State and Local Government Coordination and Preparedness (SLGCP) reports that more than \$1.6 billion in homeland security assistance to local jurisdictions, urban areas, and states has been spent on interoperable communications over the past two years alone. SLGCP has three primary grant programs that have incorporated SAFECOM's grant guidance on issues regarding communications interoperability. These programs are the State Homeland Security Grant Program, Urban Areas Security Initiative (UASI) Grant Program, and the Law Enforcement Terrorism Prevention Grant Program. Many of the system procurements and enhancements supported by this funding are in the process of being implemented.

It is important to note, however, that although SAFECOM has developed consensus guidance and tools to improve the grant-making process, SAFECOM does not directly manage nor provide funding to State or local agencies for communications projects. Given the sheer number of state and local public safety agencies, regional communication implementation simply cannot be managed centrally from Washington. Grant guidance is an important step toward improving national interoperability because it helps to align public safety communications-related grant dollars with the national effort to improve interoperability at all levels of government.

In addition, the Office of Management and Budget (OMB) requires that all Federal agencies demonstrate their programs are fully aligned with SAFECOM guidance in developing their own communications plans.

Coordination of Communications Spectrum Policy

The communications spectrum is a critical component for operability; it is the highway over which voice, data, and image communications travel. Radio spectrum is a finite resource—there is only so much available, and it is shared by public safety, radio broadcasters, government users, and other commercial and private consumers. The large demand for this resource can lead to overcrowding, which in turn can cause delays in or disruption of communication for public safety. The Federal Communications Commission (FCC) has allocated certain frequencies to public safety, but these allocations are fragmented, creating challenges for communications among different agencies and jurisdictions. In the Intelligence Reform and Terrorism Prevention Act of 2004 (P.L. 108-458), Congress required the FCC, in consultation with DHS and the National Telecommunications and Information Administration (NTIA), to conduct a study to assess the spectrum needs for Federal, State, and local emergency responders, which is due in December 2005. SAFECOM is currently assessing public safety spectrum needs in support of the President's national spectrum management initiative. DHS, in consultation with the Department of Commerce and other relevant agencies, is developing a Spectrum Needs Plan based on these assessments, which will be delivered to the President by the end of November

2005. SAFECOM believes in maintaining the current schedule to open the 24 megahertz (MHz) of spectrum in the 700 MHz band allocated by the FCC in 1998 for public safety use in accordance with recommendations from the Public Safety Wireless Advisory Committee.

Coordination of Communications Planning

Strengthening and ensuring basic-level public safety communications capabilities, as well as backup communications, are key tasks in improving communications. Once agency-specific operability is ensured, it is essential to progress towards multi-jurisdictional and multi-disciplinary interoperability, which requires attention to more than technology. SAFECOM has identified five interrelated building blocks that are essential to forming a foundation for multi-jurisdictional and multi-disciplinary communications capabilities that include governance, standard operating procedures (SOP), technology, training and exercises, and usage.

SAFECOM has developed an interoperability continuum to measure a community's level of progress in these elements. The continuum helps communities assess where they are deficient and provides valuable insight to Federal policy makers for targeting interoperability assistance.

As the continuum provides a guide for communities to progress towards interoperability, the National Interoperability Baseline study, a major initiative undertaken by SAFECOM, will provide a statistically significant, quantitative measurement of where communities stand on the path towards interoperability. The development of the survey methodology was initiated in January 2005, and the resulting study will allow SAFECOM to identify areas with operability and interoperability shortfalls, track the impact of Federal programs and measure the success of these programs, establish an ongoing process and mechanism to measure the state of interoperability on a recurring basis, and develop an interoperability baseline self-assessment tool for State and local public safety agencies.

Statewide Communications Interoperability Planning (SCIP)

SAFECOM has made considerable progress in developing statewide planning tools. In 2004, SAFECOM partnered with the Commonwealth of Virginia and the Department of Justice to develop a strategic plan for improving statewide interoperable communications for the state. The effort was based on SAFECOM's "bottom-up," locally-driven approach, which improves upon many previous statewide communications planning efforts that use a top-down approach by considering the requirements of the emergency responders who are the primary users and who control most of the wireless infrastructure. Based on lessons learned from the Virginia planning process, SAFECOM published the Statewide Communications Interoperability Planning (SCIP) Methodology as a model for integrating practitioner input into a successful statewide strategic plan for every state.

Regional Communications Interoperability Pilots

SAFECOM is also implementing Section 7304 of the Intelligence Reform and Terrorism Prevention Act of 2004 (Public Law 108-458), which authorized the Secretary of Homeland Security to carry out at least two Regional Communications Interoperability Pilots (RCIP). In accordance with Congressional criteria for determining the location of the pilot sites, as well as criteria outlined by the program itself, SAFECOM selected the State of Nevada and the

Commonwealth of Kentucky as RCIP locations. SAFECOM, in coordination with SLGCP's Interoperable Communications Technical Assistance Program, is helping both states implement the SCIP methodology.

Building on lessons learned from the SCIP Methodology and earlier SAFECOM initiatives, the RCIP projects will help OIC identify models for improving communications and interoperability that take into account the wide range of challenges across the Nation. When the projects are complete, Nevada and Kentucky will each have improved interoperability plans, and we will be able to use the lessons learned to better develop or strengthen replicable tools and methodologies that will be made available to public safety practitioners, as well as to State and local governments. An interim report regarding the progress of the pilot projects has been submitted to Congress. A final report will be provided to Congress in June 2006.

SAFECOM believes that statewide emergency communications plans are fundamental to an effective response to a catastrophic event. As States continue to develop their own plans, SAFECOM recommends that they do so in coordination with SAFECOM methodologies and guidance.

RapidCom

SAFECOM has always emphasized that mission-critical operations are the primary concern of public safety. Through efforts such as RapidCom, SAFECOM initiated a program to help improve capabilities for immediate incident-level interoperable emergency communications in ten high-threat urban areas centered in Boston, Chicago, Houston, Jersey City, Los Angeles, Miami, New York, Philadelphia, San Francisco, and the Washington metropolitan area. In coordination with SLGCP, the Department of Justice's 25 Cities Program, and the DHS Wireless Management Office, SAFECOM worked closely with public safety leaders in the ten high-risk urban areas to assess their communications interoperability capacity and needs, and to identify and implement solutions. In keeping with SAFECOM's "bottom-up" approach, local officials drove the design and implementation of solutions in their jurisdictions.

With the on-time completion of the RapidCom project, incident commanders in each of the urban areas have now confirmed they have the ability to communicate adequately with each other and their respective command centers within one hour of an incident. The lessons learned from RapidCom can be applied to all public safety agencies at the Federal, State, local, and tribal levels.

In the Department of Homeland Security Appropriations Act, 2006, Congress has provided \$5 million in funding to expand RapidCom to other urban areas.

Conclusion

SAFECOM will continue to emphasize that before progress can be made to improve interoperable communications, operability must first be in place. The initiatives described above are helping to advance operability and interoperability of public safety communications. We must continue to pursue a comprehensive strategy that takes into account all issues associated with improving communications while ensuring that the needs of emergency responders are met.

Though many challenges remain, we believe we have accomplished a great deal in the short time DHS has managed this program.

We are confident that with your continuing support and the assistance of our many Federal partners, we will continue to move towards a world where lives and property are never lost because public safety agencies are unable to communicate or lack compatible equipment and training resources.

This concludes my prepared statement. With the Committee's permission, I request my formal statement be submitted for the record. Mr. Chairman, Ranking Member Pascrell, and Members of the Subcommittee, I thank you for the opportunity to appear before you today and will be happy to answer any questions that you may have.

Appendix I: OIC Authorities from the Intelligence Reform and Terrorism Prevention Act of 2004

Congress, with the passage of the Intelligence Reform and Terrorism Prevention Act of 2004 (PL 108-458) less than a year ago, gave OIC and SAFECOM legislative authority to carry out its responsibilities. Before passage of this act, responsibility for addressing interoperability was spread across three different agencies. The following is a scorecard of OIC legislative authorities, activities that have been conducted under those authorities, and the progress achieved on each activity:

OIC Authority from the Intelligence Reform and Terrorism Prevention Act of 2004	OIC Activities	Progress
Coordinate with other Federal agencies to establish a comprehensive national approach to achieving public safety interoperable communications;	<ul style="list-style-type: none"> • Developing a national strategy, which leverages work conducted by other agencies across the Federal government • Working with the National Institute of Standards and Technology (NIST) to develop communication standards 	<ul style="list-style-type: none"> • On schedule • On schedule
Develop, with Federal agencies and state and local authorities, minimum capabilities for communications interoperability for Federal, State, and local public safety agencies;	<ul style="list-style-type: none"> • Created the Statement of Requirements for Public Safety Wireless Communications and Interoperability (SoR) • Working with the Office for Domestic Preparedness (ODP) on the Target Capabilities List 	<ul style="list-style-type: none"> • Completed • On schedule
Accelerate voluntary consensus standards for public safety interoperable communications;	<ul style="list-style-type: none"> • Developed a plan, with NIST, and delivered a report to Congress on accelerating the development of national voluntary consensus standards for public safety interoperable communications • Working with NIST to develop a P25 	<ul style="list-style-type: none"> • Completed • On schedule

	Conformance Testing program that will use independent labs	
Develop and implement flexible open architectures for short- and long-term solutions to public safety interoperable communications;	<ul style="list-style-type: none"> Developing the Public Safety Architecture Framework 	<ul style="list-style-type: none"> On schedule
Identify priorities for research, development, and testing and evaluation within DHS and assist other Federal agencies in doing the same with regard to public safety interoperable communications;	<ul style="list-style-type: none"> Created a Testing and Evaluation working group to identify testing priorities for interoperability gateways and is currently evaluating other potential communications products for lab testing Developing a standardized report format for presenting test results 	<ul style="list-style-type: none"> On schedule On schedule
Establish coordinated guidance for Federal grant programs for public safety interoperable communications.	<ul style="list-style-type: none"> SAFECOM's grant guidance has been incorporated in public safety communications related grant guidance including the FY 2003 Federal Emergency Management Agency (FEMA) grants, the FY 2003/FY 2004/FY 2005 Department of Justice's Office of Community Oriented Policing Services (COPS) grants, the FY 2004/FY 2005 ODP grants 	<ul style="list-style-type: none"> Completed
Provide technical assistance to State and locals regarding planning, acquisition strategies, and other functions necessary to achieve public safety communications interoperability;	<ul style="list-style-type: none"> Implemented the RapidCom Initiative Developed the Interoperability Continuum Conducting Regional Communications Interoperability Pilots 	<ul style="list-style-type: none"> Completed Completed On schedule

	(RCIP) in Kentucky and Nevada	
Develop and disseminate best practices to improve public safety communications interoperability;	<ul style="list-style-type: none"> • Created SAFECOM Grant Guidance • Developed the Statewide Communications Interoperability Planning (SCIP) Methodology • Developed the Interoperability Continuum • Developed the Communications Tabletop Exercise Methodology • Created additional tools and models to help public safety users 	<ul style="list-style-type: none"> • Completed • Completed • Completed • Completed • Completed
Develop appropriate performance measures and milestones to measure the nation's progress to achieving public safety communications interoperability;	<ul style="list-style-type: none"> • Developing the National Interoperability Baseline 	<ul style="list-style-type: none"> • On schedule
Provide technical guidance, training, and other assistance to support the rapid establishment of consistent, secure, and effective interoperable communications capabilities in the event of an emergency in urban and other areas determined by the Secretary of Homeland Security to be at consistently high levels of risk from terrorist attack; and develop minimum interoperable communications capabilities for emergency response providers.	<ul style="list-style-type: none"> • Implemented the RapidCom Initiative • Conducting Regional Communications Interoperability Pilots (RCIP) in Kentucky and Nevada 	<ul style="list-style-type: none"> • Completed • On schedule

Appendix II: Tools and Methods based on State and Local Pilots

Tools and methods that SAFECOM has developed based on State and local pilot efforts include:

- **Communications Tabletop Exercise Methodology**, a process for a communications-focused tabletop exercise replicable across urban areas.
- **Tabletop Exercise After-Action Report**, a template for capturing key findings and identifying gaps following each tabletop exercise.
- **Interoperability Pocket Guide**, a process for creating an area-specific interoperability pocket guide to ensure local public safety officials are aware of current capabilities available in their areas.
- **Templates for Improving Interoperability**, including governance charter, standard operating procedure, and memorandum of agreement templates to help communities improve interoperability.
- **Operational Guide for the Interoperability Continuum – Lessons Learned from RapidCom**, which outlines the importance of each element of the Interoperability Continuum, provides common challenges to consider when working towards improved interoperability and recommends key actions to increase an area's capabilities.